

REMARKS/ARGUMENTS

In this Amendment, Applicants amend claim 1 to recite “level of the third control signal”, amend claim 14 to recite “selects the second data signal”, amend claim 19 to recite “a fourth control signal”, amend claim 20 to recite “circuit of claim 19”, amend claim 22 to recite “selects the second data signal”, amend claim 25 to recite “filter that selects”, amend claim 26 to recite “circuit of claim 25” and “output by the correlation filter”, amend claim 28 to recite “the first data signal”, and amend claim 31 to recite “data signals based on”, all substantially as suggested by the Examiner. Applicants also amend claim 34 in order to recite circuit components, substantially as suggested by the Examiner. Additionally, Applicants make other amendments to claims 1-6 and 8-34 in order improve clarity. No new matter is introduced.

No claim amendments are made in response to the Examiner’s rejections under 35 U.S.C. § 103(a).

Prior to entry of this Amendment, claims 1-34 were pending in the application. After entry of this Amendment, claims 1-34 remain pending in the application.

In the Office Action, the Examiner objected to claims 1-15, 19, 20, 22, 25, 26, 28, and 31 (no specific objection was recited for claim 29); rejected claim 34 under 35 U.S.C. § 112, ¶ 2; and rejected claims 24, 28, 30, 32, and 34 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,504,578 B1 to Gu (“Gu”) in view of U.S. Patent Application Publication No. 2002/0024995 A1 to Kim (“Kim”).

The Examiner also stated that: (1) claims 16-18, 21, and 23 are allowed; (2) claims 1-15, 19, 20, and 22 would be allowable if rewritten or amended to overcome the associated objections; and (3) claims 25-27, 29, 31, and 33 would be allowable if rewritten in independent

form to include all of the limitations of the base claim and any intervening claims, as well as being amended to overcome the associated objections.

Allowed and Allowable Claims

Applicants gratefully acknowledge the Examiner's statements that claims 16-18, 21, and 23 are allowed and that claims 1-15, 19, 20, 22, 25-27, 29, 31, and 33 would be allowable.

Claim Objections

Applicants submit that the amendments (discussed above) to claims 1-15, 19, 20, 22, 25, 26, 28, and 31, all substantially as suggested by the Examiner, obviate the Examiner's objections to claims 1-15, 19, 20, 22, 25, 26, 28, and 31.

Claim Rejection Under 35 U.S.C. § 112, ¶ 2

Applicants submit that the amendment (discussed above) to claim 34 in order to recite circuit components, substantially as suggested by the Examiner, obviates the Examiner's rejection of claim 34 under 35 U.S.C. § 112, ¶ 2.

Rejections Under 35 U.S.C. § 103(a)

To establish a prima facie case of obviousness under 35 U.S.C. § 103(a) using multiple references: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention; (2) there must be a reasonable expectation of success to combine the references in a manner resulting in the claimed invention; and (3) the references must teach or suggest all the claim limitations. MPEP 2143.

However, Applicants submit that there is no suggestion or motivation, either in Gu, Kim, or the knowledge generally available to one of ordinary skill in the art, to combine Gu and Kim in a manner resulting in the invention of claim 24 or 30. At least partly as a result, Applicants

also submit that no proper combination of Gu, Kim, and the other art of record teaches or suggests all the limitations of claim 24 or 30.

Applicants note that in FIG. 7 of Gu, “DC eliminator 700 first eliminates the DC from the received VSB signal . . . to detect the sync signals” (Gu, c. 8/ll. 47-59), then “vsync correlator 721 of the sync signal detecting unit 720 obtains the correlation of the DC-eliminated VSB signal with the reference vsync signal” (Id., c. 8/ll. 60-62), “maximum value position detector 722 then detects the position of the symbol having a highest correlation with the reference vsync signal for each field” (Id., c. 10/ll. 29-31), and “once the ‘S7’ signal is received, the hsync signal generator 724-3 calculates the position of the hsync signal from the position of symbol ‘S8’ by using a simple counter to thereby generate the hsync signal” (Id., c. 10/ll. 29-31).

Thus, Gu delineates a specific sequence in which DC is eliminated before detecting the vsync signal, the vsync signal is detected prior to calculating the position of an hsync signal (“the position of the hsync signal can be detected at a position relative to the detected vsync signal without a separate hsync signal detector”), and the vsync signal is detected prior to symbol timing recovery.

In contrast, Kim discloses “symbol timing recovery without using a sync signal” (Kim, p. 2/¶ [0011]) (emphasis added), as well as the separation and detection of the vsync and hsync signals after symbol timing recovery (Id., pp. 2-3/¶ [0021]).

As a result, Applicants submit that there is no suggestion or motivation to combine Gu and Kim, nor is there motivation to combine Gu and Kim in a manner resulting in the invention of claim 24 or 30. Further, Applicants submit that the Examiner has not provided the kind of articulated reasoning envisioned by the U.S. Supreme Court in KSR v. Teleflex (e.g., in the Office Action, the Examiner generally alleges that it would be obvious to use switching unit 400

of Kim in VSB sync signal detecting unit 720 of Gu, but not where switching unit 400 would be inserted in VSB sync signal detecting unit 720, how the would be implemented, or what effect switching unit 400 might have on VSB sync signal detecting unit 720 in light of the differences between Gu and Kim).

For at least these reasons, Applicants submit that independent claims 24 and 30 are patentable under 35 U.S.C. § 103(a) over any proper combination of Gu, Kim, and the other art of record. Applicants further submit that dependent claims 25-29 and 31-34 are patentable under 35 U.S.C. § 103(a) over any proper combination of Gu, Kim, and the other art of record, at least for the same reasons that claims 24 and 30 are patentable, from which claims 25-29 and 31-34 directly or indirectly depend.

Request for Reconsideration and Allowance

Accordingly, in view of the above amendments and remarks, reconsideration of the rejections and allowance of each of claims 1-34 in connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

If necessary, the Director of the U.S. Patent and Trademark Office is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; in particular, extension of time fees.

Respectfully submitted,

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By

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